REMARKS

Claims 4-13 are pending in the instant application, with claims 4, 11, 12 and 13 being independent. Claims 4-7, 9 and 11-13 have been amended.

No new matter has been added and entry of these amendments is respectfully requested.

REJECTIONS OF THE CLAIMS UNDER 35 U.S.C. § 112

The Examiner rejected claims 4, 6 and 7 under 35 U.S.C. § 112, first paragraph.

The Examiner rejected claim 4 for allegedly failing to comply with the written description requirement. Specifically, the Examiner stated that the limitation "wherein the space from the light source bulb to the parabolic mirror is unobstructed..." is not "inherently or implicitly" taught in the specification and therefore, this limitation is new matter.

Applicant respectfully disagrees with the Examiner's position on this issue. The specification includes the drawings. As such, the limitation "wherein the space from the light source to the parabolic mirror is unobstructed..." is in the specification in Figure 1. Further, the critical aspect of this limitation is void space and there is absolutely no manner of depicting void space without having the space appear void, as it appears in Figure 1. As such, Applicant asserts that this limitation is not new matter. However, Applicant has amended paragraph [0072] of the specification herein, to include a description of that which is already shown in Figure 1, so as to expedite prosecution of the instant application.

Next, the Examiner rejected claims 6 and 7 for failing to meet the enablement requirement. Specifically, the Examiner alleged, "the engine pitch display is not described in sufficient detail to enable one of ordinary still to make/use the invention." Applicant asserts that a person having ordinary skill in the art (hereinafter "PHOSITA") would have been able to make and use the present invention based on the disclosure when the application was filed. Further, these rejections are moot in light of the arguments made herein with respect to independent claim 4, which claims 6 and 7 depend from.

The Examiner rejected claims 4, 6, 7, 9 and 13 under 35 U.S.C. § 112, second paragraph.

With regard to claim 4, the Examiner stated that two of the recited limitations are the same. The alleged "same" language is that of the following: (1) the light source bulb being positioned in the focal point of the mirror; and (2) the bulb being "directly" in the focal point of the parabolic mirror. In one respect, Applicant agrees with the Examiner that the word "directly" means that there are no obstructions between the mirror and the bulb. In light of this agreement, the Examiner must agree that Applicant has in fact claimed this feature as a positive limitation. So as to expedite prosecution of the instant application, Applicant has canceled the language "wherein the space from the light source bulb to the parabolic mirror is unobstructed by elements that inhibits the convergence flux".

Further, Applicant has amended claim 4 in accordance with the Examiner's suggestion, so as to recite only parabolic mirror, rather than both a concave mirror and a parabolic mirror for consistency purposes. Applicant thanks the Examiner for this suggestion. Applicant has also changed "the parabolic mirror" to "a parabolic mirror" to provide antecedent support for this limitation.

Next, regarding claims 6 and 7, the Examiner noted that the "coring shutter" appears to be the same as the shutter disc. The Examiner suggested that Applicant use the same language if that is the same element. As such, Applicant has changed "coring shutter" to "shutter disk" in the claims. Similarly, Applicant's representatives have also changed the language "an apparatus's object" to "optic filter."

Additionally, the slit regulating device language has been deleted from claims 6 and 7, as it is already included through their dependency from claim 4.

With respect to the Examiner's noting that "it is unclear how each of the cited elements is structurally related to the others, Applicant notes the following. The engine pitch display is presented in the initial description at page 6. This detailed description, however, is not necessary, as this component in isolation is not a new construction. However, when, as is done in claims 6 and 7, the additional parts of the apparatus are controlled by a computer program, which assures the command and control for all items within the system, it eliminate the need for employees to control the system.

With regard to claim 9, the Examiner alleged that it is unclear how the size of the orifice corresponds to the frequency of the rotating shutter disk. The relative size of the orifice inherently corresponds with the rotational frequency of the disk. Although Applicant does not agree that this aspect is unclear, Applicant has added the word "inherently" to claim 9 so as to expedite prosecution of the instant application. This inherent relationship is as follows. The proportionality of the size of the holes in the shutter disk and the intensity of light flow is given by its rotational frequency in combination with the special form of the slit. Therefore, if the rotational frequency is high, the holes are small and the light intensity and frequency are low. Conversely, when the rotation speed is low, the holes are large and the light intensity is high. Based upon the description present in the originally filed application, the inherency of this relationship can be understood by a PHOSITA.

The Examiner also rejected independent claim 13 for lacking antecedent basis for the lens, the optical filter, the digital voltage modulator, the rotating disk engine, the first fan, the second fan or the engine pitch display. Applicant has changed "the" to "a" before these limitations for proper antecedent support. However, Applicant points out that each of these features is already preceded by "a", except for the optical filter. The optical filter was preceded by the word "said", which has been replaced with the word "a" in claim 13.

REJECTION OF THE CLAIMS UNDER 35 U.S.C. § 103 OVER WHITEHURST, IN VIEW OF YOSHIDA

On page 5 of the Official Action, the Examiner rejected claims 4, 8 and 10-12 as being unpatentable under 35 U.S.C. 103(a) over U.S. Pat. No. 5,843,143 to Whitehurst (hereinafter "Whitehurst") in view of U.S. Pat. No. 5,272,570 to Yoshida (hereinafter "Yoshida").

Regarding independent claim 4, the Examiner asserted that Whitehurst teaches all of the elements of claim 4, except for a controller for the slit (i.e., the slit control device); however, the Examiner believes that "the inherency of the element is clear..." Additionally, the Examiner agrees that Whitehurst does not discuss the position of the light with respect to the concave mirror. Therefore, the Examiner uses Yoshida, which allegedly teaches placing the light source in the focal point of the concave mirror, to cure the deficiencies of Whitehurst.

There are significant differences between Whitehurst and the present invention. The mirror shown in Whitehurst is a diachronic "hot mirror" *not* a parabolic mirror. The diachronic mirror inactively is not a mirror, which reflects the flow of light, but rather it is a lens, which is transparent to the field of visible light. By its nature, the Whitehurst mirror is a special lens that has the property of ***removing the infrared radiations*** so that the light crossing the "hot mirror" are only those wavelengths of the visible spectrum of light. This difference between the present invention and Whitehurst is described in Whitehurst at Col. 2, lines 26-27, and Col. 4, lines 33-39. The description in Whitehurst clearly states that the "hot mirror" removes the infrared radiations, allowing only the visible spectrum of light (i.e., 550 nm through 750 nm) to pass through. The diachronic "hot mirror" is well-known in the art and the above-described consequences are also well-known in the art.

Thus, a main distinguishing feature of the present invention from that of Whitehurst is that the present invention is able to reflect and concentrate the flow of light **as a whole**, rather than concentrating only a portion of the light. To make this distinction clear in the claims, Applicant has added the language, "**wherein the light source as a whole is concentrated**" to independent claims 4, 11, 12 and 13. Claims 4-13 (i.e., all pending claims) now include such language directly or indirectly. The electromagnetic frequency band disclosed in the present invention has a range of up to 3000 nm. This is a direct consequence of the significant differences between the present invention and that described in Whitehurst.

Next, the shutter that is disclosed by Whitehurst is a solenoid, actively controlled by a switch. As such, the Whitehurst shutter moves up and down, as controlled by the electromagnetic roll. This up and down movement interrupts the flow of the light source by obturation. Thus, element 7 of Whitehurst obstructs light flow, as is described in Col. 4, lines 26-32. Whitehurst clearly shows that the shutter has the role of opening the light from the source for up to 9999 seconds. In other words, the shutter will obstruct the flow of light at least every 3 hours. Again, the language of claim 4 indicating that the parabolic mirror is directly in front of the light source bulb, as well as Figure 1, for example, show that the present invention does not have any obstructions in the path of emitted light.

With regard to claim 8, the Examiner alleged that Whitehurst and Yoshida "inherently teach a light bulb and Whitehurst teaches a fan that ventilates the whole apparatus, including the light source." However, as described above, the mirror used and the resulting reflected light from the mirror differ drastically between Whitehurst and the present invention. Claim 4 has been amended to highlight these differences. Therefore, this ground for rejection is moot.

With regard to independent claims 11 and 12, the Examiner alleged that the size of the orifice being proportional to the light flux is inherent in Whitehurst. In support of this theory, the Examiner explains, "If less light can pass through a particular element...the light flux is reduced. Applicant respectfully traverses this statement, as this notion is not necessarily correct. The light flux can be high based on frequency *or* amplitude. Although having a smaller opening may indicate that the amplitude is smaller, it does not necessarily indicate that the frequency is less rapid.

Additionally, independent claims 11 and 12 have been amended to include the language "**wherein the light source as a whole is concentrated**". This serves to further distinguish claims 11 and 12 from that of Whitehurst.

With regard to claim 10, the Examiner states, "Whitehurst teaches providing wavelengths of 500, 540 and 570 nm, which is included in Applicant's range." In light of the amendment to independent claim 4, which claim 10 depends from, those wavelengths of light well above 570 nm are included in the present invention as a consequence of the parabolic mirror that is used. As such, this basis for rejection is moot in view of the amendment to claim 4. The present invention includes all light, visible and non-visible wavelengths.

REJECTION OF THE CLAIMS UNDER 35 U.S.C. § 103 OVER WHITEHURST AND YOSHIDA, IN VIEW OF PRZYBILLA AND ANDERSON

On page 7 of the Official Action, the Examiner rejected claims 5, 6, 7, 9 and 13 as being unpatentable under 35 U.S.C. 103(a) over U.S. Pat. No. 5,843,143 to Whitehurst (hereinafter "Whitehurst") and U.S. Pat. No. 5,272,570 to Yoshida (hereinafter "Yoshida"), in view of U.S. Pat. Pub. No. 2003/0036751 to Anderson (hereinafter "Anderson") and WO Pat. No. 9,213,597 to Przybilla (hereinafter "Przybilla").

Regarding claim 5, the Examiner admitted that Whitehurst does not teach a digital voltage modulator. Further, the Examiner asserted that Anderson teaches a digital modulator of light flux. The Examiner alleged that it would have been obvious to have modified Pryzbilla to incorporate the digital modulator of Anderson "because doing so would increase precision and control over the rotation speed of the shutter." The Examiner further alleged that Whitehurst also does not disclose an engine, but it would have been allegedly obvious to modify Whitehurst based on the engine disclosed in Pryzbilla. However, Przybilla could not be modified in any way with the additional limitations of the present invention. One of the reasons that Przybilla is not able to achieve the deeper penetration of tissue, as the present invention is that the wavelength of light of Przybilla dissipates upon reaching the skin tissue. Thus, the wavelength of light used in this invention is critical, as has been described above.

Even further, this basis for rejection is moot in light of the amendment to independent claim 4. Additionally, Przybilla and Anderson differ in significant ways from the present invention and claims. In Przybilla and Anderson, for example, there is no means disclosed for producing and controlling a modulation of the frequency of flow of issued photons. Amplitude and not frequency can be controlled in Przybilla and Anderson, making the apparatus inefficient because the flux of light is relatively low, which has the effect of decreasing the depth of light penetration in the tissue of patients. Claim 5 is amended herein to describe that both the amplitude and frequency of the light flux can be adjusted in the present invention so as to distinguish it from the cited references. This limitation is disclosed in paragraphs [0145] through [0155] of the present invention.

Regarding claims 6 and 7, the Examiner admits that Whitehurst does not teach a computer that controls the apparatus' handling and coordination. Additionally, this rejection is also rendered moot in light of the arguments above and the changes made to independent claim 4, wherein the type of mirror used in the present invention drastically enhances the capability and flux of reflective rays in the present invention. The secondary applied references do not cure this deficiency.

Regarding claim 9, the Examiner noted that the relationship between the size of the orifice and the frequency of the rotating shutter disk is unclear. The slit regulating apparatus casts the light beam in "light pockets" that is less than the frequency of the emitted photons and having a wavelength that is greater than the wavelength of the photons emitted by the source light. Because the present invention provides for slits in the rotating shutter disk to be adjusted using the slit regulating device, it is engineered with adjusted amplitudes and frequencies. Further, the area of frequency of the present invention is between 1550-3000 turns per minute, which Przybilla does not disclose.

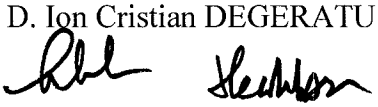
Regarding claim 13, the Examiner agreed that Whitehurst does not teach a second fan for ventilating the engine and digital modulator specifically. However, the Examiner alleged that it is obvious to one of ordinary skill in the art to cool elements in an electrical apparatus when those elements develop heat. In light of the amendment herein to claim 13, this basis for rejection is hereby rendered moot because claim 13 now includes a parabolic mirror that concentrates the light source *as a whole*, thereby distinguishing claim 13 from the cited references, which do not concentrate all wavelengths of light.

CONCLUSION

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate. It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as the intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Should the Examiner have any questions or comments regarding this matter, the undersigned may be contacted at the below-listed telephone number.

Respectfully submitted,
D. Ion Cristian DEGERATU et al.



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